

AMENDMENTS

IN THE CLAIMS

Please cancel claims 1-31 and add new claims 32-88 as follows:

1.-31. (Cancelled)

32. (New) An apparatus for treating a heart, at least a portion of which comprises a region of less viable or non-viable heart tissue, said apparatus comprising:

a plurality of peripheral links disposable on at least one region of viable heart tissue, each said peripheral link being configured for connecting to either a support link or another of said peripheral links, at least one of said peripheral links further configured for attachment to the region of viable heart tissue; and

a plurality of support links disposable on the region of less viable or non-viable heart tissue, each said support link being configured for attachment to either a peripheral link or another of said support links, wherein at least one of said support links is further configured for attachment to the region of less viable or non-viable heart tissue;

wherein said peripheral links are configured to move coincident with the contraction and dilation of the region of viable heart tissue and wherein said support links are configured to cause a corresponding movement of the region of less viable or non-viable heart tissue in response to said movement of said peripheral links.

33. (New) The apparatus of claim 32, wherein said at least one peripheral link comprises a plurality of peripheral links wherein each said peripheral links is configured for connecting to either a support link or another of said peripheral links, wherein at least one of said peripheral links is further configured for attachment to the region of viable heart tissue; wherein said plurality of peripheral links are arranged to substantially surround the region of less viable or non-viable heart tissue.

34. (New) The apparatus of claim 33, wherein said plurality of peripheral links are arranged wherein said plurality of peripheral links do not substantially surround the region of less viable or non-viable heart tissue.

35. (New) The apparatus of claim 33, wherein said plurality of peripheral links are connected to each other.

36. (New) The apparatus of claim 33, wherein said plurality of peripheral links are not connected to each other.

37. (New) The apparatus of claim 33, wherein each said support link extends between two opposing peripheral links.

38. (New) The apparatus of claim 32, wherein at least two support links intersect each other.

39. (New) The apparatus of claim 38, wherein said at least two intersecting support links are interlocking.

40. (New) The apparatus of claim 38, wherein said apparatus is attached to said heart at the point of intersection between said at least two support links.

41. (New) The apparatus of claim 32, wherein said plurality of support links do not intersect each other.

42. (New) The apparatus of claim 32, wherein each said support link has a proximal end and a distal end wherein said proximal ends are connected to each other at a central region of said apparatus.

43. (New) The apparatus of claim 42, wherein each said support link is connected to said peripheral link at said distal end.

44. (New) The apparatus of claim 42, wherein said central region is attached to said heart.

45. (New) The apparatus of claim 33, further comprising groups of said plurality of support links, wherein each said support link has a proximal end and a distal end and wherein support links of a group are serially connected to each other wherein the distal end of one said support link is connected to the proximal end of an adjacent support link, each said connection point defining a node.

46. (New) The apparatus of claim 45, wherein each of said groups of said plurality of support links extends radially outward from a central region of said apparatus.

47. (New) The apparatus of claim 45, wherein the distance between adjacent nodes is constant.

48. (New) The apparatus of claim 45, wherein adjacent support links define an angle at said node, wherein said angle is constant for each said node.

49. (New) The apparatus of claim 45, wherein each said group of support links defines a sinusoidal pattern.

50. (New) The apparatus of claim 46, wherein the length of said plurality of support links of each said group increases progressively from said central region to a peripheral region of said apparatus.

51. (New) The apparatus of claim 33, wherein the lengths of said plurality of peripheral links are substantially the same.

52. (New) The apparatus of claim 33, wherein said plurality of peripheral links have substantially the same lengths.

53. (New) The apparatus of claim 33, wherein said plurality of peripheral links have varying lengths.

54. (New) The apparatus of claim 33, wherein said plurality of peripheral links have substantially the same shape.

55. (New) The apparatus of claim 32, wherein said plurality of peripheral links have varying shapes.

56. (New) The apparatus of claim 32, wherein said plurality of support links have substantially the same lengths.

57. (New) The apparatus of claim 32, wherein said plurality of support links have varying lengths.

58. (New) The apparatus of claim 32, wherein said plurality of support links have substantially the same shapes.

59. (New) The apparatus of claim 32, wherein said plurality of support links have varying shapes.

60. (New) The apparatus of claim 32, wherein said plurality of support links have substantially the same widths.
61. (New) The apparatus of claim 32, wherein said plurality of support links have varying widths.
62. (New) The apparatus of claim 32, further comprising a central region comprising a compliant material.
63. (New) The apparatus of claim 60, wherein said compliant material is selected from the group comprising silicone, urethane and a biologic material.
64. (New) The apparatus of claim 32, wherein said apparatus has a substantially planar configuration.
65. (New) The apparatus of claim 64, wherein the region of less viable or non-viable heart tissue is at a ventricular wall.
66. (New) The apparatus of claim 32, wherein said apparatus has a substantially conical configuration.
67. (New) The apparatus of claim 66, wherein the region of less viable or non-viable heart tissue is at an apical wall.
68. (New) The apparatus of claim 33, wherein said plurality of peripheral links and said plurality of support links form interconnected cells.
69. (New) The apparatus of claim 68, wherein said interconnected cells comprise hinges.
70. (New) The apparatus of claim 68, wherein said cells have a width and a length and wherein one or both of said width and said length are selected to optimize said movement of said plurality of peripheral links and said movement of said plurality of support links.
71. (New) The apparatus of claim 32, wherein said apparatus is configured for placement on an epicardial surface of said heart.

72. (New) The apparatus of claim 32, wherein said apparatus is configured for placement on an endocardial surface of said heart.

73. (New) The apparatus of claim 32, wherein said apparatus is comprised of a material selected from the group consisting of superelastic alloys, stainless steel, superelastic polymers, and any combinations thereof.

74. (New) The apparatus of claim 73, wherein said superelastic alloy comprises nickel-titanium.

75. (New) The apparatus of claim 32, further comprising a coating covering at least a portion of the apparatus.

76. (New) The apparatus structure of claim 75, wherein said coating comprises a material selected from the group consisting of thermoplastics, thermoset plastics, silicone, parylene, heparin, thromboresistance substances, antiproliferative substances, platinum, gold, tantalum, tin, tin-indium, zirconium, zirconium alloys, zirconium oxide, zirconium nitrate, phosphatidyl-choline, and pyrolytic carbon.

77. (New) A system for treating a heart, at least a portion of which comprises a region of less viable or non-viable heart tissue, said apparatus comprising:

the apparatus of claim 32; and
means for attaching the apparatus to the heart.

78. (New) The system of claim 77, further comprising a tissue interface member for positioning between the apparatus and a surface of the heart.

79. (New) The system of claim 78, wherein said tissue interface member comprises a synthetic material.

80. (New) The system of claim 79, wherein said synthetic material comprises a biologically inert coating selected from the group consisting of parylene, heparin solutions, hydrophilic solutions, thromboresistance substances, antiproliferative substances, and endothelial cells.

81. (New) The system of claim 78, wherein said tissue interface member is lubricious.

82. (New) The system of claim 78, wherein said tissue interface member comprises a biologic material.

83. (New) The system of claim 82, wherein said biologic material comprises one of the group consisting of pericardium, submucosal tissue and collagen.

84. (New) The system of claim 77, wherein said attachment means comprises one or more of the group consisting of adhesives, coagulated tissue and a mechanical anchor.

85. (New) The system of claim 84, wherein said mechanical anchor comprises one of the group consisting of a pin, a hook, a screw, a staple and a suture.

86. (New) The system of claim 77, further comprising a means for delivering and deploying said apparatus through the chest wall of a patient.

87. (New) The system of claim 77, further comprising a radiation source on said apparatus.

88. (New) The system of claim 77, further comprising an electromagnetic assist device coupled to said apparatus.